CLAIMS

I claim:

1. An active noise control system, comprising:

a speaker for generating a noise attenuation signal; and

a controller that controls the speaker with a control signal corresponding to the noise attenuation signal, the controller using a single air pressure signal to determine an estimated engine speed and an estimated throttle position and generating the control signal based upon the estimated engine speed and the estimated throttle position.

2. The system of claim 1, including a pressure sensor that is adapted to be supported in a position to detect air flow in an air intake manifold, the pressure sensor providing the air pressure signal.

3. The system of claim 1, wherein the pressure signal has a frequency and wherein the controller uses the frequency to determine the estimated engine speed.

4. The system of claim 3, including a level crossing trigger and wherein the controller determines the estimated engine speed by identifying an engine firing frequency based upon processing the pressure signal using the level crossing trigger.

5. The system of claim 3, wherein the controller determines a dominant order from the pressure signal frequency and determines the engine speed based upon the dominant order.

6. The system of claim 3, including a band pass filter for filtering the pressure signal and wherein the controller uses the filtered signal to determine the engine speed.

7. The system of claim 1, wherein the pressure signal has a DC component and the controller uses the DC component to determine the estimated throttle position.

8. The system of claim 7, wherein the DC component is indicative of a mean airflow and the controller uses the DC component and the estimated engine speed to determine the estimated throttle position.

9. A method of controlling an active noise control system, comprising:

estimating an engine speed from an air flow signal;

estimating a throttle position from the same air flow signal; and

generating a noise control signal using the estimated engine speed and the estimated throttle position.

10. The method of claim 9, including estimating the engine speed using a frequency of the air flow signal.

11. The method of claim 10, including determining a dominant order from the frequency and estimating the engine speed based on the dominant order.

12. The method of claim 10, including estimating the frequency of the signal and filtering the signal to cancel out a selected range of frequencies near the estimated frequency and determining the frequency from the filtered signal.

13. The method of claim 9, including estimating the throttle position using a component of the air flow signal that indicates a mean air flow.

14. The method of claim 13, including estimating the throttle position using the air flow signal component and the estimated engine speed.